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EXAMINER
CHANKONG, DOHM

ART UNIT	PAPER NUMBER
2152	

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Please find below and/or attached an Office communication concerning this application or proceeding.

			Application No.	Applicant(s)
Office Action Summary			09/768,374	SHAH ET AL.
			Examiner	Art Unit	
			Dohm Chankong	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _18 March 2005_.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-30_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-30_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _3/18/05, 5/18/05_.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1> This action is in response to careful consideration of the Applicant's amendment and remarks. No new claims have been added.

2> This action is a final rejection.

Response to Arguments

3> Applicant's arguments with respect to claims 1-7 and 20 have been considered but are moot in view of the new ground(s) of rejection.

4> Examiner would like to make two points in regards to the new limitation in claim 1 of "maintaining byte stream order over the first and second protocols."

One, Applicant has argued that the Haviv reference is deficient because it does not maintain the byte stream order during protocol translation. The Applicant cited several sections within the specification in support of his assertion that this is not new matter. However, the sections cited by Applicant are directed towards maintaining the correct sequence of packets. Examiner believes that this is not what is disclosed in the claim.

The new limitation seems directed towards maintaining the byte stream order of each packet as they are translated from one protocol to the next. This feature is not disclosed in the specification.

And second, in constructing the rejection to the claims, Examiner has relied on the specification for guidance. For instance, when some claim 1 discloses translating a packet

from a first protocol to a second protocol, the protocols comprising transport-layer,

connection-oriented, byte stream based protocols, Examiner relied on the specification to

help further determine the scope of these protocols. Applicant disclosed Winsock DP as a

possible example of the second protocol.

Haviv was utilized to reject the claims based on this disclosure. In particular, Haviv

discloses translating TCP/IP (first protocol) packets to transactions, the transactions

including socket transactions, and the transactions having a second [Sockets Direct Path

which is Winsock DP] protocol [see 0045, 0049, claim 51 where : it is well known in the art

that sockets utilize byte streams]. Thus, Haviv's packet translation and functionality is

parallel to the functionality of claim 1, and even uses a protocol supported by Applicant's

specification. If Applicant asserts that Haviv does not maintain the byte stream order in his

translation, Examiner requests further explanation on how his invention is able to maintain

the byte stream order of the packets despite having equivalent translation steps.

5>   Applicant's arguments in regards to claims 8-19 and 21-30 have been fully considered

but they are not persuasive.

6>   In regards to claim 8, Applicant has added that the packet comprises a transport-layer

control packet that need not be translated to further distinguish over Haviv. However, Haviv

discloses that the command can be a HTTP request (for a web page for instance) [see 0058

and 0060]. As is well known in the art, an HTTP request is analogous to a transport-layer

control packet.

7>   In regards to claims 11, 21 and 28, Applicant has further defined the specified criterion

has having to relate to whether a connection that has been established is using a first protocol

before translating to a second protocol. In relation to the rest of the claim, this criterion

seems to have implicitly been checked. The previous limitation disclosed receiving at a proxy

node a first packet from the client using a first protocol. Since the proxy node has received

the first packet using a first protocol, this seems to mandate that the connection between the

client and the proxy node has been established using the first protocol. That is, whatever

protocol that is utilized by the first packet should dictate the protocol of the connection with

which the packet was sent. Therefore, the added limitation seems to be merely claiming what

is inherent to the functionality of the claim. Appropriate explanation is requested if

Applicant believes that Examiner has interpreted the claim language incorrectly.

8>   As to claim 19, Applicant has argued that the combination of references to do not

disclose "performing load balancing among the proxy nodes based on protocol processing

requirements". In regards to this limitation, the rejection relied upon Applicant's disclosure:

"at one level, nodes...can perform session-level load balancing on a group of proxy

nodes...using network address translation techniques..." [page 28, lines 5-8]. Pursuant to this

disclosure, the Squire reference was utilized to teach session level load balacning among

Haviv's proxy nodes. Contrary to Applicant's assertions, there is sufficient motivation to

combine and reasonable expectation of its success. Haviv discloses a group of proxies in

parallel [0055] but does not disclose performing load balancing among them. Squire disclosed

performing session level (layer 5) load balancing on the incoming packets (based on the information inside them) [column 3 «lines 3-16» | column 4 «lines 13-41»]. Squire also discloses the same exact technique (network address translation) for performing the session-level load balancing as specified in Applicant's disclosure. Combining Haviv and Squire would thus enable session level load balancing among the plurality of Haviv's proxies. Improving network systems with load balancing techniques is quite ubiquitous and expected in the art. Furthermore, Haviv hints at this functionality by suggesting that the load balancing is based on information within the connection request [0036].

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9>   Claims 1-7 and 11-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

a.   Claim 1 has been amended to include new limitations including "maintaining byte stream order over the first and second protocols". After a careful examination of the specification, Examiner concludes that this functionality is not present in the

specification. Applicant cites sections in the specification that is directed towards

maintain the order of packets using a queue to store out of order packets (the idea of

maintaining packet order is well known in the art, especially concerning TCP).

However, this is not analogous to the claimed limitation; according to the argument,

Applicant is concerned with maintaining the byte order within each packet as they are

translated from one protocol to the next in order to preserve certain streaming

semantics. Examiner was unable to find direct support for this functionality within

the specification.

b.   Claim 11, 21 and 28 have been amended to further limit the criteria that the

packet must meet before it is translated. However, after a careful examination of the

specification, no description of this feature as it is written was found. The closest

functionality was related to receiving a packet, and then determining whether or not a

connection has been established before continuing processing; that is, the packet

doesn't meet the criteria of whether or not the connection has been established but

rather a connection is simply checked to see if it exists before the system continues.

Therefore, there is no disclosure for the added limitation as it is written.

c.   Claim 19 is directed towards performing load balancing among the proxy

nodes based on protocol processing requirements. No description of this feature was

found in the disclosure, which related performing "session-level" load balancing at the

proxy nodes. This is not equivalent to load balacning based on protocol processing

requirements. Session-level load balancing, or Layer-5 load balancing is directed

towards performing the load-balancing based on the content of the packet. Load

balancing based on "protocol processing" suggests a entirely different concept

altogether and is not supported by the disclosure.

d.   Claim 20 is directed twoards load balancing based on application processing

requirements. As with claim 19, no description of this was found in the specification.

In regards to load balancing at the second level, Applicant merely discloses

"application level" load balancing. Application level, or layer-7 load balancing works

by examining the payload of the packet and is not related to "application processing".

Clarification is requested if Applicant believes Examiner has interpreted the claims

(and the supporting disclosure) incorrectly.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form

the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10>   Claim 8 is rejected under 35 U.S.C § 102(e) as being anticipated by Haviv, U.S Patent

Publication No. 2002|0059451.

11>   As to claim 8, Haviv discloses a method of protocol processing comprising:

receiving a packet at a proxy node in a system area network from a first node that

generated the packet using a first protocol wherein the packet is addressed to a second node

in the system area network that uses a second protocol [abstract | Figure 4 | Figure 5 |

paragraphs 0014, 0016, 0049, 0053];

processing the packet in the proxy node [paragraph 0053]; and

sending a response from the proxy node to the first node using the first protocol, if

said processing results in a determination that the packet comprises a transport-layer control

packet that need not be translated and sent to the second node [paragraph 0058 and 0060 :

"HTTP request" which results in a web page that is cached in the gateway];

wherein the first and second protocols comprise first and second transport-layer,

connection-oriented, byte stream based protocols [Figure 5 | paragraphs 0049, 0054, 0057 and

0059 where: Haviv's sockets direct protocol (SDP) is analogous to the second protocol].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art
> are such that the subject matter as a whole would have been obvious at the time the invention was made to a
> person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

12>   Claims 1 are rejected under 35 U.S.C § 103(a) as being unpatentable over Haviv, in

view of Garcia et al, U.S Patent No. 6.493.343 ["Garcia"].

13>   As to claim 1, Haviv discloses a method comprising:

receiving a packet at a proxy node in a system area network from a first node that

generated the packet using a first protocol [abstract | Figure 4 | Figure 5 | paragraphs 0014,

0016];

translating the packet using a second protocol used by a second node [paragraphs

0049, 0053]; and

sending the translated packet from the proxy node to the second node [Figure 1 |

paragraphs 0053, 0054];

wherein the first and second protocols comprise first and second transport-layer,

connection-oriented, byte stream based protocols, and the proxy node manages first and

second endpoints corresponding to the first and second protocols [Figure 5 | paragraphs 0049,

0054, 0057 and 0059 where: Haviv's sockets direct protocol (SDP) is analogous to the second

protocol], and the translating comprises relaying a byte stream [claim 41 and 51 where :

Haviv discloses translating a TCP byte stream to a socket transaction (byte stream)].

Haviv does not explicitly disclose maintaining byte stream order over the first and

second protocols.

14>   Garcia discloses maintain in-order packet delivery of packets over multiple paths

within a system area network [column 1 «lines 48-60 and 65-67» | column 7 «lines 55-60»]. It

would have been obvious to one of ordinary skill in the art to incorporate Garcia's guaranteed

in-order delivery of data packets within Haviv's system area network. One would have been

motivated to provide such functionality into Haviv as the benefits and advantages of in-order delivery are already well known and appreciated in the art.

15>   As to claim 6, Haviv discloses the method of claim 1 wherein the first node comprises a network client coupled to the proxy node through a network node, and the second node comprises an application node [Figure 5 «items 52, 54, 56, 66, 70, 72» | paragraphs 0055, 0058 where: the gateway is analogous to a network node and the server is analogous to an application node].

16>   As to claim 7, Haviv discloses the method of claim 1 wherein the first node comprises an application node and the second node comprises a network client coupled to the proxy node through a network node [Figure 5 «items 52, 54, 56, 66, 70, 72» | paragraphs 0035, 0051, 0055, 0058 where: Haviv's gateway is analogous to a network node and the server is analogous to an application node].

17>   As to claim 11, Haviv discloses a system comprising:

       a system area network comprising a network node, a proxy node, and an application node [Figure 5 «items 52, 54, 56, 66, 70» | paragraphs 0014, 0019, 0053 and 0054 where: Haviv's gateway is analogous to a network node and server is analogous to an application node] and a network client [Figure 5 «item 52» | paragraph 0053];

       wherein the proxy node comprises a processor configured for:

receiving a first packet from the network client through the network node addressed

to the application node using a first protocol [paragraphs 0053, 0058]; and

if the first packet meets a specified criterion relating to whether a connection has

already been established between the network client and the proxy node using the first

protocol, translating the first packet using a second protocol used by the application node,

and sending the translated first packet to the application node [paragraph 0053 : where as

previously stated in the response, that the connection between the client and the proxy is

inherently the first protocol because the proxy has received the first packet using the first

protocol];

wherein the first and second protocols comprise first and second transport-layer,

connection-oriented, byte stream based protocols [Figure 5 | paragraphs 0049, 0054, 0057 and

0059 where: Haviv's sockets direct protocol (SDP) is analogous to the second protocol].

18>   As to claim 12, Haviv discloses the system of claim 11 wherein the proxy node

processor is further configured for processing the first packet if the first packet does not meet

the specified criterion [paragraph 0022, 0023 and 0056 where: whether or not the data is

received from a trusted client is analogous to the criteria].

19>   As to claim 13, Haviv discloses the system of claim 12, wherein the proxy node

processor is further configured for sending a response to the network client through the

network node using the first protocol, the response being in reply to the first packet if the

first packet does not meet the specified criterion [paragraph 0058].

20>   As to claim 14, Haviv discloses the system of claim 11 wherein the proxy node

processor is further configured for receiving a second packet from the application node

addressed to the network client using the second protocol [paragraph 0035, 0049];

       if the second packet meets a second criterion, translating the second packet using

the first protocol and sending the translated second packet to the network client through the

network node [paragraph 0016, 0022, 0053].

21>   As to claim 15, Haviv discloses the system of claim 14 wherein the proxy node

processor is further configured for processing the second packet if the second packet does not

meet the second criterion [paragraphs 0022, 0055 and 0056].

22>   As to claim 16, Haviv discloses the system of claim 15,wherein the proxy node

processor is further configured for sending a response to the application node using the

second protocol, the response being in reply to the second packet if the second packet does

not meet the second criterion [paragraphs 0018, 0023, 0028 and 0031].

23>   As to claim 18, Haviv discloses the system of claim 11 further comprising a plurality of

network clients, and wherein the system area network comprises a plurality of network

nodes, a plurality of proxy nodes and a plurality of application nodes, wherein each proxy

node [Figure 1 | Figure 5 | paragraphs 0014, 0019, 0054], comprises a respective processor

configured for:

received an input packet from one of the network clients through one of the network

nodes addressed to a particular one of the application nodes using a first protocol [paragraphs

0053, 0058]; and

if the input packet meets a specified criterion, translating the input packet used by the

particular application node, and sending the translated first packet to the particular

application node [paragraph 0053].

24>   As to claim 21, Haviv discloses an apparatus comprising:

a plurality of network ports [Figure 5 | paragraph 0056]; and

a processor configured for:

receiving through one of the network ports a first packet from a network client

through a network node in a system area network that generated the first packet using

a first protocol [paragraphs 0053, 0056]; and

if the first packet meets a specified criterion relating to whether a connection has

already been established with the network client using the first protocol, translating the first

packet using a second protocol used by the application node, and sending the translated first

packet through one of the network ports to the application node [paragraphs 0053 and 0056 :

where as previously stated in the response, that the connection between the client and the

proxy is inherently the first protocol because the proxy has received the first packet using the

first protocol];

wherein the first and second protocols comprise first and second transport-layer, connection-oriented, byte stream based protocols [Figure 5 | paragraphs 0049, 0054, 0057 and 0059 where: Haviv's sockets direct protocol (SDP) is analogous to the second protocol].

25> As to claim 22, Haviv discloses the apparatus of claim 21 wherein the processor is further configured for processing the first packet and sending a response to the network client through the network node using the first protocol if the packet does not meet the specified criterion, the response being in reply to the first packet [paragraph 0058].

26> As to claim 23, Haviv discloses the apparatus of claim 21 wherein the processor is further configured for:

receiving a second packet through one of the network ports from the application node addressed to the network client using the second protocol [Figure 5 «items 54, 56» | paragraph 0035, 0049, 0056];

if the second packet meets a second criterion, translating the second packet using the first protocol and sending the translated second packet to the network client through the network node [paragraph 0016, 0053].

27> As to claim 24, Haviv discloses the apparatus of claim 23 wherein the processor is further configured for processing the second packet and sending a response to the application node using the second protocol if the second packet does not meet the second criterion, the response being in reply to the second packet [paragraphs 0018, 0023, 0028].

28>   As to claim 25, Haviv discloses the apparatus of claim 121, wherein the processor is

further configured for performing load balancing among the application nodes connected to

the network ports based on application processing requirements [Figure 5 | paragraphs 0021,

0022 and 0036].

29>   As to claim 27, Haviv discloses the apparatus of claim 21 wherein the first protocol is

based on Transmission Control Protocol/Internet Protocol (TCP/IP) [paragraph 0053].

30>   As to claim 28, as it is merely an article that implements the steps of the method of

claim 11, it does not teach or further define over the limitations of claim 11. Therefore claim 28

is rejected for the same reasons set forth in claim 11, <u>supra</u>.

31>   As to claim 29, as it is merely an article that implements the steps of the methods of

claims 12 and 13, it does not teach or further define over the limitations of claims 12 and 13.

Therefore claim 28 is rejected for the same reasons set forth in claims 12 and 13, <u>supra</u>.

32>   As to claim 30, Haviv discloses the article of claim 28 further comprising instructions

for causing the computer system to:

        receive a second packet at the proxy node from the application node using the second

protocol [paragraphs 0018, 0035];

translate the second packet using the first protocol [paragraphs 0016, 0049 and 0054];

and

send the translated second packet to the network client through the network node

[Figure 1 | paragraphs 0023, 0051].

33>   Claims 2 and 3 are rejected under 35 U.S.C § 103(a) as being unpatentable over Haviv

and Garcia, in further view of Ketcham, U.S Patent No. 6.721.334.

34>   As to claim 2, Haviv does not specifically disclose the method of claim 1 wherein

translating the packet comprises translating a single packet into multiple packets and

wherein sending the translated packet comprises sending several translated packets.

35>   In a similar field of invention, Ketcham is directed towards aggregating and de-

aggregating packets within a router in a network, the router capable of performing protocol

translation of the packets. Ketcham discloses a method wherein translating the packet

comprises translating a single packet into multiple packets and wherein sending the

translated packet comprises sending several translated packets [column 4 «lines 37-46» |

column 14 «lines 13-18»]. Ketcham's translation method (de-aggregating a translated packet to

multiple packets) enables a single packet to be transmitted to multiple destinations, thereby

increasing network communication efficiency between the nodes in the network. Therefore,

it would have been obvious to one of ordinary skill in the art to incorporate Ketcham's packet

translation functionality into Haviv's packet translation method for the obtained advantages

taught by Ketcham [see Ketcham, column 1 «lines 8-10»]. Furthermore, Haviv discloses that his proxy is enabled with a variety of capabilities, including multiplexing [0043].

36>   As to claim 3, Haviv does not specifically disclose the method of claim 1 wherein receiving the packet comprises receiving multiple packets, translating the packet comprises translating the multiple packets into a single packet and sending the translated packet comprises sending the single translated packet.

37>   Ketcham discloses receiving the packet comprises receiving multiple packets, translating the packet comprises translating the multiple packets into a single packet and sending the translated packet comprises sending the single translated packet [column 2 «lines 61-67» | column 4 «lines 37-47»]. Ketcham's translation method allows aggregating multiple packets into a single packet, thereby increasing network communication efficiency between the nodes in the network. Therefore, it would have been obvious to one of ordinary skill in the art to incorporate Ketcham's packet translation functionality into Haviv's packet translation method for the obtained advantages taught by Ketcham. Furthermore, Haviv discloses that his proxy is enabled with a variety of capabilities, including multiplexing [0043].

38>   Claims 4, 5, 9, 10, 17 and 26 are rejected under 35 U.S.C § 103(a) as being unpatentable over Haviv and Garcia, in view of Speight et al, 4th USENIX Windows Systems Symposium Paper 2000, Pp. 113–124 of the Proceedings, August 3-4, 2000 ["Speight"].

39>   Speight was cited by Applicant in the final rejection Office Action, dated 9.2.2004.

40>   As to claim 4, Haviv discloses the method of claim 1 wherein the first protocol is
based on Transmission Control Protocol/Internet Protocol (TCP/IP) and the second
protocol is a system area network protocol [paragraphs 0019, 0049 and 0054 where: Sockets
Direct Protocol (SDP) is a known system area network protocol and the VI architecture is an
example of system area network architecture] but does not specifically disclose that the
second protocol is lightweight.

41>   Speight discloses a Windows Socket Direct Lite, a streamlined version of the
standard Windows SDP [abstract | "Introduction"]. As is well known in the art, a
lightweight protocol increases network performance and efficiency by reducing resource
utilization. Therefore, it would have been obvious to one of ordinary skill in the art to
incorporate Speight's lightweight alternative to Haviv's sockets direct protocol for the stated
advantages.

42>   As to claim 5, Haviv discloses the method of claim 1 wherein the first protocol is
based on a system area network protocol and the second protocol is based on Transmission
Control Protocol/Internet Protocol (TCP/IP) [paragraphs 0035, 0038, 0049 and 0054]. Haviv
does not specifically disclose a lightweight, system area network.

43>   Speight discloses a Windows Socket Direct Lite, a streamlined version of the

standard Windows SDP [abstract | "Introduction"]. As is well known in the art, a

lightweight protocol increases network performance and efficiency by reducing resource

utilization. Therefore, it would have been obvious to one of ordinary skill in the art to

incorporate Speight's lightweight alternative to Haviv's sockets direct protocol for the stated

advantages.

44>   As to claims 9 and 10, as they do teach or further define over the limitations of claims

4 and 5, respectively, they are rejected for the same reasons set forth in claims 4 and 5, supra.

45>   As to claim 17, as it is merely a system that implements the step of the method of

claim 4, it does not teach or further define over the limitations of claim 4. Therefore, claim 17

is rejected for the same reasons set forth in claim 4, supra.

46>   As to claim 26, as it is merely an apparatus that implements the step of the method of

claim 5, it does not teach or further define over the limitations of claim 5. Therefore, claim 26

is rejected for the same reasons set forth in claim 5, supra.

47>   Claim 19 is rejected under 35 U.S.C § 103(a) as being unpatentable over Haviv and

Garcia, in view of Squire et al, U.S Patent No. 6.745.243 ["Squire"].

48>   As to claim 19, Haviv discloses the system of claim 18, wherein each network node

comprises a processor configured for performing load balancing among the proxy nodes

[paragraphs 0033, 0047 and 0055] but does not specifically disclose that the load balancing is

based on protocol processing requirements.

49>   Squire discloses load balancing based on protocol processing requirements [column 4

«lines 22-41» | column 6 «lines 52-62»] by being able to session-layer load balance network

traffic based on layer 5 information for the obtained advantage of improving efficiency and

available bandwidth of the network. Haviv discloses a plurality of proxies in parallel [0055].

Therefore it would have been obvious to one of ordinary skill in the art to have implemented

Squire's protocol-based load balancing into Haviv to enable appropriate selection of proxies

within Haviv's SAN.

50>   Claim 20 is rejected as being unpatentable over Haviv, Garcia and Squire, in view of

Nelson, U.S Patent No. 6.882.654.

51>   As to claim 20, Haviv and Squire disclose the system of claim 19, wherein the proxy

node processors are further configured for performing load balancing among the application

nodes [paragraphs 0021, 0022 and 0036], but does not disclose load balacing based on

application processing requirements.

52>   In a related field of invention, Nelson discloses load balancing between nodes in a

network based on application processing requirements (application layer or Layer-7) [column

1 «lines 11-15» | column 4 «lines 33-37» | column 8 «lines 43-55»]. Haviv discloses load

balancing between the proxies and the application servers based on a predetermined policy

and information received in a request. Therefore it would have been obvious to implement

Nelson's application-level load balancing into Haviv's load balancing scheme. Applicaition-

level load balancing would enable Haviv to load balance between servers based on the

content of the packet; such an implementation would be extremely beneficial to Haviv as he

discloses utilizing a variety of services and commands [0061].

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

advisory action. In no event, however, will the statutory period for reply expire later than
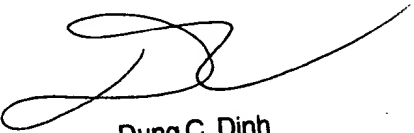
SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dohm Chankong whose telephone number is (571)272-3942. The examiner can normally be reached on 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (571)272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dung C. Dinh
Primary Examiner

DC